

**REMARKS**

Claims 1, 2, 4-9, 11 and 12 are pending. Claim 3 was previously canceled, and claims 10-13 are newly canceled.

The amendment to claim 1 is supported by the original claim 13 and paragraph [0044] of this application (U52006/0139846).

No new matter has been added by way of the above-amendment.

***Claim Objections***

The Examiner has objected to claims 1, 2, 4-11 and 13 due to certain informalities as noted in the current Office Action at pages 2-4. In particular, the Examiner objects to these claims for the reasons such as insufficient antecedent basis, inconsistent category and improper dependency.

Regarding the antecedent basis and category issues, Applicants have followed the Examiner's suggestions.

Regarding the improper dependency issue, the Examiner states that dependent claim 10 fails to further limit independent claim 1. The Examiner will note that claim 10 has been canceled.

As such, reconsideration and withdrawal of the objection are respectfully requested.

***Issues Under 35 U.S.C. § 103***

The following prior art based rejections have been maintained:

(A) Claims 1-2, 4, 7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakao et al. (US 6,246,568 B1, hereinafter "Nakao") in view of Noguchi et al. (US 6,800,222 B1, hereinafter "Noguchi");

(B) Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakao and Noguchi, as applied to claim 4, above, and further in view of Sonobe et al. (US 6,258,337 B1, hereinafter "Sonobe"); and

(C) Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakao and Noguchi, as applied to claim 1, above, and further in view of Moriguchi et al. (US 2001/0051300 A1, hereinafter "Moriguchi").

Applicants respectfully traverse the rejections.

M.P.E.P. § 2143 sets forth the guidelines in determining obviousness. First, the Examiner has to take into account the factual inquiries set forth in *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), which has provided the controlling framework for an obviousness analysis. The four *Graham* factors of: determining the scope and content of the prior art; ascertaining the differences between the prior art and the claims that are at issue; resolving the level of ordinary skill in the pertinent art; and evaluating any evidence of secondary considerations (e.g., commercial success; unexpected results). 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). Second, the Examiner has to provide some rationale for determining obviousness, wherein M.P.E.P. § 2143 set forth some rationales that were set established in the recent decision of *KSR International Co. v Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007). Here, the Examiner has not appropriately resolved the *Graham* factors, including ascertaining the differences between the prior art and the claims that are at issue.

Also, Applicants enclose herewith a new Declaration under 37 CFR 1.132 by Mr. Hidekazu Mori as a secondary consideration. The attached Declaration will hereinafter be referred to as "the Second Declaration" to distinguish it from the Declaration filed December 18, 2009 ("the First Declaration.")

**(1) The present invention of amended claim 1 is not disclosed in Nakao**

We now turn to the claim language. Amended claim 1 has the following features:

- i) at the time of mixing a particulate elastomer and a carbonaceous material with each other in a powdery form to obtain a powdery mixture, there is a concentration of solids content of 50 % or more by weight; and
- ii) at the time of dry-forming the powdery mixture, there is a concentration of solids content of 50% or more by weight.

Therefore, it is clear in the present invention of amended claim 1 that all of the particulate elastomer, the carbonaceous material and the obtained powdery mixture have

concentration of solids content of 50% or more by weight. That is, a concentration of solids content of the input materials is always 50% or more by weight at any time after the mixing step.

**In contrast, Nakao does not disclose that "at the time of dry-forming the powdery mixture, there is a concentration of solid contents of 50% or more by weight".**

As the Examiner pointed out, exactly, Nakao discloses that at the time of mixing, there is a concentration of solid latex in purified water (that is, emulsion) of between 30 and 70%.

However, Nakao does not disclose or hint that at the time of dry-forming the powdery mixture, there is a concentration of solids content of 50% or more by weight. Rather, Nakao discloses that when in the electrode solution, the emulsion is preferred to be diluted in purified water at a specified concentration, and to add activated carbon and a conductive agent (See column 18, lines 28-33 of Nakao).

That is, in Nakao, the emulsion of latex is further diluted in purified water to form an electrode "solution", So, the concentration of solids content of the obtained mixture in Nakao is possibly lower than 30-70% by weight.

For the above reasons, Nakao does not disclose that "at the time of dry-forming the powdery mixture, there is a concentration of solids content of 50% or more by weight", as presently claimed.

**Moreover, Nakao does not disclose the "dry forming" of the present invention.**

In Nakao, the electrode solution is "applied", that is "coated" or "sprayed", onto the foil and the coated solution is dried to form an electrode layer on the foil. However, this "coating" or "spraying" clearly corresponds to a "wet-molding", which as described in the present application (See paragraph [0044] of the present application) is not part of the present invention.

The Examiner asserts that winding the dried conductive electrode on a separator to form an electrode layer corresponding to the dry-forming of the present invention. However, the Examiner's assertion is not correct.

In Nakao, the electrode layer has already been formed on the foil by using wet-molding method before winding on a separator.

In contrast, the present invention requires a step of dry-forming in preparing the electrode layer itself.

For the above reasons, Nakao does not disclose the step of dry-forming in the present invention of amended claim 1.

**(2) According to the present invention of amended claim 1, a specific effect which is not disclosed in Nakao is obtained**

As mentioned above, in the present invention, all of the particulate elastomer, the carbonaceous material and the obtained powdery mixture have a concentration of solids content of 50% or more by weight. That is, a concentration of solids content of the input materials is always 50% or more by weight at any time after the mixing step.

When the solids content concentration is 50% or more by weight, aggregation or the like of the particulate elastomer and the carbonaceous material is not caused, so that the granular form can be kept (see paragraph [0038] of the present application).

By preventing the aggregation of materials, the electrode layer can be appropriately formed and the obtained capacitor has a high capacity and small internal resistance.

As evidence that the above-statements are correct, the attached Second Declaration includes a description of experiments.

As noted in the Declaration, when the solids content of the mixture is less than 50 wt%, the mixture becomes clay-like, loses fluidity and becomes aggregated (See the "ADDITIONAL EXAMPLE 1"). Even so, the electrode layer is possibly formed by dry-forming, that is, by chipping the aggregated mixture to obtain a powdery mixture, and then dry-forming the obtained powdery mixture.

However, once the mixture is aggregated, the performance of the obtained electrode is deteriorated and the capacitor has low electrostatic capacity and high internal resistance (see the "RESULT" of "ADDITIONAL EXAMPLE 1").

On the other hand, when the solids content of the mixture is 50 wt% or more, the mixture keeps the granular form and does not aggregate (see "EXAMPLE 1" and "ADDITIONAL EXAMPLE 2" in the Second Declaration).

Therefore, the obtained electrode shows better performance and the capacitor has higher electrostatic capacity and lower internal resistance (see "RESULT" of EXAMPLE 1 and ADDITIONAL EXAMPLE 2).

Thus, according to the present invention of amended claim 1, a specific effect is obtained which is not disclosed in Nakao.

As mentioned above, the present invention of amended claim 1 is definitely different from the method disclosed in Nakao. And, according to the present invention, by having the difference, the specific effect which is not disclosed in Nakao is obtained.

As such, significant patentable distinctions exist between the present invention and the teachings of Nakao. Furthermore, the secondary references of Noguchi, Sonobe and Moriguchi fail to cure the deficiencies of Nakao.

Accordingly a *prima facie* case of obviousness cannot be said to exist. Reconsideration and withdrawal of the rejections are respectfully requested.


In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq., Reg. No. 43,575, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By  **GARTH M. DAHLEN**  
USPTO #43,575

Marc S. Weiner

Registration No.: 32,181

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant

Attachment:

1) Second Declaration